

14. (New) The method of Claim 13, including considering several system variables, including an elevator roping arrangement, a position of a drive mechanism, a position of the sheave and a landing at which worse case car loading conditions typically occur.

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mid.*  
15. (New) The method of Claim 14, including comparing the considered system variables and determining which of those variables has a higher significance than the other variables as part of determining which portion of the belt is most likely to wear.

16. (New) The method of Claim 13, including assigning a significance value to that which is considered in step (A) and using the significance value as part of determining which portion of the belt is most likely to wear.

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**In the Title**

Please replace the title at line 1 of page 1 with the following:

**STRATEGIC PLACEMENT OF AN ELEVATOR INSPECTION DEVICE BASED  
UPON SYSTEM AND COMPONENT ARRANGEMENT**

**REMARKS**

Applicant thanks the Examiner for the remarks and analysis contained in the first Office Action. Claims 1 and 5 have been amended to clarify that which was already inherently stated in the claims. New claims 12 through 16 have been added. Claims 1-16 are currently pending in this application. Applicant respectfully requests reconsideration of this application.

With regard to the objections to the drawings, Applicant submits herewith a proposed correction to the drawings including notations in red putting labels on the various components shown schematically in the drawings. Formal corrections will be provided upon receiving a notice of allowance in this case.

The Examiner objected to the specification under 35 U.S.C. § 112, first paragraph. Applicant respectfully traverses the rejection. As stated in the specification

(for example on page 5), this invention provides a strategy for placing an elevator inspection device relative to a belt based upon determining a portion of the belt that is most likely to wear, which is determined based upon considering a number of elevator system variables (like component placement, worst case load, etc.). The specification lists the variables to be considered for a variety of systems. The numerous examples provided teach one skilled in the art how to apply those variables according to this invention for a variety of arrangements to arrive at an ideal placement of the inspection device.

The statement referred to by the Examiner on page 10 of the specification in no way implies anything other than one skilled in the art who has the benefit of the specification will be able to use the teachings of the specification to apply the inventive approach to a particular elevator system arrangement. In other words, given the description (i.e., the statement of the inventive approach and the numerous example applications of that approach) those skilled in the art will be able to apply the inventive approach to their own particular elevator system arrangement, which may have components arranged identically with or different from the given examples.

Because different elevator systems have components arranged in different configurations, the characteristics or variables to be considered in one situation will not necessarily have applicability in another. The statement in the specification referenced by the Examiner recognizes that fact.


Claims 1-11 were rejected under 35 U.S.C. § 103 as being obvious over Yamazaki, et al. Applicant respectfully traverses the rejection. Yamazaki, et al. is only concerned with measuring tension on elevator ropes. There is no teaching or suggestion whatsoever for determining how much an elevator belt has worn over time. The only discussion of wear in Yamazaki, et al. pertains to the wear of a sheave and not an elevator rope or belt. Yamazaki, et al. is directed to an entirely different problem than Applicant's invention. Yamazaki, et al. do not provide any hint that one could or would want to determine which portion of an elevator belt is most likely to wear based upon elevator system variables.

Applicant respectfully submits that this case is in condition for allowance. If the Examiner believes that a telephone conference will facilitate moving this case forward to

being issued, Applicant's representative can be contacted at the telephone number indicated below.

Respectfully submitted,

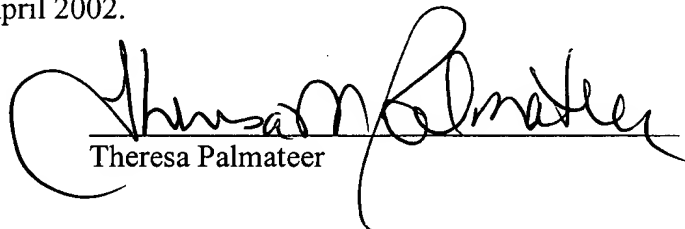
**CARLSON, GASKEY & OLDS, P.C.**

  
\_\_\_\_\_  
David J. Gaskey  
Registration No. 37,139  
400 West Maple, Suite 350  
Birmingham, Michigan 48009  
(248) 988-8360

Dated: 4-2-02

**CERTIFICATE OF MAILING**

I hereby certify that the enclosed Response is being deposited with the United States Postal Service as first-class mail, postage prepaid, in an envelope addressed to Assistant Commissioner of Patents and Trademarks, Washington, D.C. 20231, on this 2nd day of April 2002.

  
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Theresa Palmateer

**APPENDIX A**

**Marked up version showing changes made**

Please make the following changes to the claims.

1. (Amended) An elevator system comprising:
  - a cab;
  - at least one rope having a plurality of metallic load bearing members associated with the cab;
  - at least one sheave that guides the rope as the cab moves; and
  - an inspection device that provides information regarding a wear condition of a portion of the rope that is most likely to wear.
  
5. (Amended) A method of inspecting at least one belt in an elevator system where the belt is associated with a cab and is guided by at least one sheave, comprising the steps of:
  - (A) determining a portion of the belt that is most likely to wear;
  - (B) positioning an inspection device relative to the belt; and
  - (C) gathering information regarding a wear condition of the portion of the belt that is most likely to wear as the cab moves between chosen positions.

Please add the following new claims.

12. (New) The system of Claim 1, wherein the cab is supported for movement within a hoistway between an uppermost position and a lowermost position in the hoistway and wherein the inspection device is positioned relative to the rope such that the entire portion of the rope that is most likely to wear is inspected by the inspection device each time that the cab travels between the uppermost and lowermost positions.

13. (New) A method of determining a wear condition of at least one belt in an elevator system where the belt is associated with a cab and is guided by at least one sheave, comprising the steps of:

- A) considering at least one of :
  - a number of bends that the belt experiences as the cab travels between locations,
  - dimensions of a sheave along which the belt travels,
  - the manner in which the sheave is supported within the elevator system,
  - an angle of belt wrap around the sheave, and
  - a worst case loading on a plurality of portions of the belt;
- B) determining a portion of the belt that is most likely to wear based upon the consideration from step (A); and
- C) positioning an inspection device relative to the belt such that the inspection device is capable of gathering wear information regarding the portion of the belt from step (B) as the cab moves within the elevator system.

14. (New) The method of Claim 13, including considering several system variables, including an elevator roping arrangement, a position of a drive mechanism, a position of the sheave and a landing at which worse case car loading conditions typically occur.

15. (New) The method of Claim 14, including comparing the considered system variables and determining which of those variables has a higher significance than the other variables as part of determining which portion of the belt is most likely to wear.

16. (New) The method of Claim 13, including assigning a significance value to that which is considered in step (A) and using the significance value as part of determining which portion of the belt is most likely to wear.